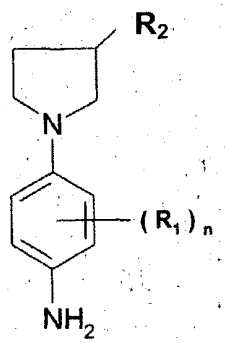
WHAT IS CLAIMED IS:

1. A composition for dyeing keratin fibers, comprising, in a medium suitable for dyeing, at least one oxidation base chosen from para-phenylenediamine derivatives substituted with a pyrrolidyl group of formula (I), and the addition salts thereof:



(I)

wherein

- n is chosen from 0 to 4, provided that when n is greater than or equal to 2, then the radicals R_1 may be identical or different,
- R_1 is chosen from halogen atoms and saturated and unsaturated, aliphatic and alicyclic C_1-C_6 hydrocarbon-based chains, wherein at least one carbon atom of the hydrocarbon-based chains may be replaced with at least one entity chosen from oxygen, nitrogen, silicon and sulphur atoms and an SO_2 group, and wherein at least one of the hydrocarbon-based chains may be substituted with at least one entity chosen from halogen atoms and hydroxyl, amino and mono- and di(C_1-C_4)alkylamino radicals; provided that the radical R_1 does not comprise a peroxide bond or a radical chosen from diazo, nitro and nitroso radicals,
- R_2 is chosen from
  - $-SiR_3R_4R_5$ radicals,
  - linear and branched C_1-C_8 alkyl radicals, which may be unsaturated, substituted

with at least one radical chosen from -$SiR_3R_4R_5$ radicals; wherein at least one carbon atom of the alkyl radicals may be replaced with at least one atom chosen from oxygen and nitrogen atoms and at least one of the alkyl radicals may be substituted with at least one group chosen from hydroxyl, amino, (C_1-C_6)alkylamino and di(C_1-C_6)alkylamino groups, and

- triarylsilanyl, triarylsilanylalkyl, triarylsilanylalkoxy, triarylsilanylalkylamine and bis(triarylsilanylalkyl)amine radicals,

wherein R_3, R_4 and R_5, which may be identical or different, are each chosen from tri(C_1-C_4)alkylsilyl radicals; a triphenylsilyl radical; a phenyl radical; and C_1-C_6 alkyl radicals which may be substituted with at least one group chosen from tri(C_1-C_6)alkylsilyl, hydroxyl, amino, (C_1-C_6)alkylamino and di(C_1-C_6)alkylamino groups.

2. The composition according to Claim 1, wherein n is equal to 0 or 1.

3. The composition according to Claim 1, wherein R_1 is chosen from halogen atoms; C_1-C_4 alkyl radicals, C_1-C_4 hydroxyalkyl radicals, C_1-C_4 aminoalkyl radicals, C_1-C_4 alkoxy radicals and C_1-C_4 hydroxyalkoxy radicals.

4. The composition according to Claim 3, wherein R_1 is chosen from methyl, isopropyl, hydroxymethyl, 2-hydroxyethyl, 1,2-dihydroxyethyl, methoxy, isopropyloxy and 2-hydroxyethoxy radicals.

5. The composition according to Claim 1, wherein R_2 is chosen from trialkylsilanyl, trialkylsilanylalkyl, trialkylsilanylalkoxy, trialkylsilanylalkylamine, bis(trialkylsilanylalkyl)amine, triarylsilanyl, triarylsilanylalkyl, triarylsilanylalkoxy, triarylsilanylalkylamine and bis(triarylsilanylalkyl)amine radicals.

6. The composition according to Claim 5, wherein R_2 is chosen from trialkylsilanyl, trialkylsilanylalkyl, trialkylsilanylalkoxy, trialkylsilanylalkylamine and bis(trialkylsilanylalkyl)amine radicals.

7. The composition according to Claim 1, wherein R_3, R_4 and R_5, which may be identical or different, are each chosen from methyl, ethyl, propyl, isopropyl, butyl, isobutyl, tert-butyl, pentyl, hexyl, cyclohexyl, phenyl and tolyl radicals.

8. The composition according to Claim 1, wherein the para-phenylenediamine derivatives of formula (I) are chosen from

- 4-[3-(3-trimethylsilanylpropoxy)-1-pyrrolidyl]phenylamine,
- 4-(3-trimethylsilanyl-1-pyrrolidyl)phenylamine,
- 4-(3-(trimethylsilanylmethoxy-1-pyrrolidyl)phenylamine,
- [1-(4-aminophenyl)-3-pyrrolidyl]trimethylsilanylmethylamine,
- 4-(3-trimethylsilanylmethyl-1-pyrrolidyl)phenylamine,
- [1-(4-aminophenyl)-3-pyrrolidyl]bistrimethylsilanylmethylamine,
- 2-(2-trimethylsilanylethyl)-4-[3-(3-trimethylsilanylpropoxy)-1-pyrrolidyl]phenylamine,
- 4-[3-(3-trimethylsilanylethyloxy)-1-pyrrolidyl]phenylamine, and
- 4-[3-(3-triphenylsilanylpropoxy)-1-pyrrolidyl]phenylamine.

9. The composition according to Claim 1, wherein the at least one oxidation base is chosen from enantiomers and diasteromers of the para-phenylenediamine derivatives substituted with a pyrrolidyl group of formula (I), and the addition salts thereof.

10. The composition according to Claim 1, wherein the at least one oxidation base is present in an amount ranging from 0.001% to 10% by weight relative to the total weight of the dye composition.

11. The composition according to Claim 1, wherein the keratin fibers are human keratin fibers.

12. The composition according to Claim 11, wherein the human keratin fibers are hair.

13. The composition according to Claim 1, further comprising at least one coupler chosen from meta-phenylenediamines, meta-aminophenols, meta-diphenols, naphthalene-based couplers and heterocyclic couplers, and the addition salts thereof.

14. The composition according to Claim 13, wherein the at least one coupler is present in an amount ranging from 0.001% to 10% by weight relative to the total weight of the dye composition.

15. The composition according to Claim 1, further comprising at least one additional oxidation base other than the oxidation base of formula (I), wherein the at least one additional oxidation base is chosen from para-phenylenediamines, bis(phenyl)-alkylenediamines, para-aminophenols, ortho-aminophenols and heterocyclic bases, and the addition salts thereof.

16. The composition according to Claim 15, wherein the at least one additional oxidation base is present in an amount ranging from 0.001% to 10% by weight relative to the total weight of the dye composition.

17. The composition according to Claim 1, further comprising at least one oxidizing agent.

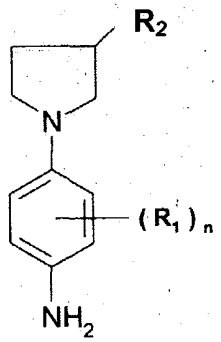
18. The composition according to Claim 17, wherein the at least one oxidizing agent is chosen from hydrogen peroxide, urea peroxide, alkali metal bromates, persalts, peracids and oxidase enzymes.

19. The composition according to Claim 1, further comprising at least one direct dye.

20. The composition according to Claim 1, wherein the medium suitable for dyeing comprises water or a mixture of water and at least one organic solvent.

21. The composition according to Claim 1, further comprising at least one adjuvant chosen from anionic, cationic, nonionic, amphoteric and zwitterionic surfactants, anionic, cationic, nonionic, amphoteric and zwitterionic polymers, inorganic and organic thickeners, antioxidants, penetration agents, sequestering agents, fragrances, buffers, dispersing agents, conditioners, film-forming agents, ceramides, preserving agents, and opacifiers.

22. A process for oxidation dyeing of keratin fibers, comprising applying to the keratin fibers a dye composition in the presence of at least one oxidizing agent, for a time that is sufficient to develop a desired coloration, wherein the dye composition comprises, in a medium suitable for dyeing, at least one oxidation base chosen from para-phenylenediamine derivatives substituted with a pyrrolidyl group of formula (I), and the addition salts thereof



(I)

wherein

- n is chosen from 0 to 4, provided that when n is greater than or equal to 2, then the

radicals R_1 may be identical or different,

- R_1 is chosen from halogen atoms and saturated and unsaturated, aliphatic and alicyclic C_1-C_6 hydrocarbon-based chains, wherein at least one carbon atom of the hydrocarbon-based chains may be replaced with at least one entity chosen from oxygen, nitrogen, silicon and sulphur atoms and an SO_2 group and at least one of the hydrocarbon-based chains may be substituted with at least one entity chosen from halogen atoms and hydroxyl, amino and mono- and di(C_1-C_4)alkylamino radicals; provided that the radical R_1 does not comprise a peroxide bond or a radical chosen from diazo, nitro and nitroso radicals,
- R_2 is chosen from
  - $-SiR_3R_4R_5$ radicals,
  - linear and branched C_1-C_8 alkyl radicals, which may be unsaturated, substituted with at least one radical chosen from $-SiR_3R_4R_5$ radicals; wherein at least one carbon atom of the alkyl radicals may be replaced with at least one atom chosen from oxygen and nitrogen atoms and at least one of the alkyl radicals may be substituted with at least one group chosen from hydroxyl, amino, (C_1-C_6)alkylamino and di(C_1-C_6)alkylamino groups, and
  - triarylsilanyl, triarylsilanylalkyl, triarylsilanylalkoxy, triarylsilanylalkylamine and bis(triarylsilanylalkyl)amine radicals,

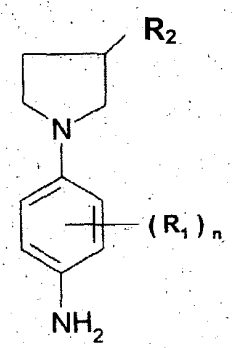
wherein R_3, R_4 and R_5, which may be identical or different, are each chosen from tri(C_1-C_4)alkylsilyl radicals; a triphenylsilyl radical; a phenyl radical; and C_1-C_6 alkyl radicals which may be substituted with at least one group chosen from tri(C_1-C_6)alkylsilyl, hydroxyl, amino, (C_1-C_6)alkylamino and di(C_1-C_6)alkylamino groups.

23. The process according to Claim 22, wherein the at least one oxidizing agent

is chosen from hydrogen peroxide, urea peroxide, alkali metal bromates, persalts, peracids and oxidase enzymes.

24. A multi-compartment device, comprising

a first compartment comprising a dye composition comprising, in a medium suitable for dyeing, at least one oxidation base chosen from para-phenylenediamine derivatives substituted with a pyrrolidyl group of formula (I), and the addition salts thereof



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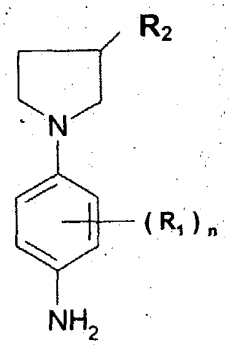
- R_1 is chosen from halogen atoms and saturated and unsaturated, aliphatic and alicyclic C_1-C_6 hydrocarbon-based chains, wherein at least one carbon atom of the hydrocarbon-based chains may be replaced with at least one entity chosen from oxygen, nitrogen, silicon and sulphur atoms and an SO_2 group and at least one of the hydrocarbon-based chains may be substituted with at least one entity chosen from halogen atoms and hydroxyl, amino and mono- and di(C_1-C_4)alkylamino radicals; provided that the radical R_1 does not comprise a peroxide bond or a radical chosen from diazo, nitro and nitroso radicals,
- R_2 is chosen from

- $-SiR_3R_4R_5$ radicals,
- linear and branched C_1-C_8 alkyl radicals, which may be unsaturated, substituted with at least one radical chosen from $-SiR_3R_4R_5$ radicals; wherein at least one carbon atom of the alkyl radicals may be replaced with at least one atom chosen from oxygen and nitrogen atoms and at least one of the alkyl radicals mm be substituted with at least one group chosen from hydroxyl, amino, (C_1-C_6)alkylamino and di(C_1-C_6)alkylamino groups, and
- triarylsilanyl, triarylsilanylalkyl, triarylsilanylalkoxy, triarylsilanylalkylamine and bis(triarylsilanylalkyl)amine radicals,

wherein R_3, R_4 and R_5, which may be identical or different, are each chosen from tri(C_1-C_4)alkylsilyl radicals; a triphenylsilyl radical; a phenyl radical; and C_1-C_6 alkyl radicals which may be substituted with at least one group chosen from tri(C_1-C_6)alkylsilyl, hydroxyl, amino, (C_1-C_6)alkylamino and di(C_1-C_6)alkylamino groups, and

a second compartment comprising at least one oxidizing agent.

25. A process for dying keratin fibers, comprising applying to the keratin fibers at least one oxidation base chosen from para-phenylenediamine derivatives substituted with a pyrrolidyl group of formula (I), and the addition salts thereof



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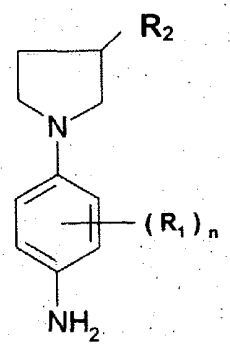
- R_1 is chosen from halogen atoms and saturated and unsaturated, aliphatic and alicyclic C_1-C_6 hydrocarbon-based chains, wherein at least one carbon atom of the hydrocarbon-based chains may be replaced with at least one entity chosen from oxygen, nitrogen, silicon and sulphur atoms and an SO_2 group and at least one of the hydrocarbon-based chains may be substituted with at least one entity chosen from halogen atoms and hydroxyl, amino and mono- and di(C_1-C_4)alkylamino radicals; provided that the radical R_1 does not comprise a peroxide bond or a radical chosen from diazo, nitro and nitroso radicals,
- R_2 is chosen from
  - $-SiR_3R_4R_5$ radicals,
  - linear and branched C_1-C_8 alkyl radicals, which may be unsaturated, substituted with at least one radical chosen from $-SiR_3R_4R_5$ radicals; wherein at least one carbon atom of the alkyl radicals may be replaced with at least one atom chosen from oxygen and nitrogen atoms and at least one of the alkyl radicals may be substituted with at least one group chosen from hydroxyl, amino, (C_1-C_6)alkylamino and di(C_1-C_6)alkylamino groups, and
  - triarylsilanyl, triarylsilanylalkyl, triarylsilanylalkoxy, triarylsilanylalkylamine and bis(triarylsilanylalkyl)amine radicals,

wherein R_3, R_4 and R_5, which may be identical or different, are each chosen from tri(C_1-C_4)alkylsilyl radicals; a triphenylsilyl radical; a phenyl radical; and C_1-C_6 alkyl radicals which may be substituted with at least one group chosen from tri(C_1-C_6)alkylsilyl, hydroxyl, amino, (C_1-C_6)alkylamino and di(C_1-C_6)alkylamino groups.

26. A compound, chosen from para-phenylenediamine derivatives substituted with a pyrrolidyl group of formula (I), and the addition salts thereof



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wherein

- n is chosen from 0 to 4, provided that when n is greater than or equal to 2, then the radicals R_1 may be identical or different,
- R_1 is chosen from halogen atoms and saturated and unsaturated, aliphatic and alicyclic C_1-C_6 hydrocarbon-based chains, wherein at least one carbon atom of the hydrocarbon-based chains may be replaced with at least one entity chosen from oxygen, nitrogen, silicon and sulphur atoms and an SO_2 group and at least one of the hydrocarbon-based chains may be substituted with at least one entity chosen from halogen atoms and hydroxyl, amino and mono- and di(C_1-C_4)alkylamino radicals; provided that the radical R_1 does not comprise a peroxide bond or a radical chosen from diazo, nitro and nitroso radicals,
- R_2 is chosen from
  - $-SiR_3R_4R_5$ radicals,
  - linear and branched C_1-C_8 alkyl radicals, which may be unsaturated, substituted with at least one radical chosen from $-SiR_3R_4R_5$ radicals; wherein at least one carbon atom of the alkyl radicals may be replaced with at least one atom chosen

from oxygen and nitrogen atoms and at least one of the alkyl radicals may be substituted with at least one group chosen from hydroxyl, amino, (C_1-C_6)alkylamino and di(C_1-C_6)alkylamino groups, and

- triarylsilanyl, triarylsilanylalkyl, triarylsilanylalkoxy, triarylsilanylalkylamine and bis(triarylsilanylalkyl)amine radicals,

wherein R_3, R_4 and R_5, which may be identical or different, are each chosen from tri(C_1-C_4)alkylsilyl radicals; a triphenylsilyl radical; a phenyl radical; and C_1-C_6 alkyl radicals which may be substituted with at least one group chosen from tri(C_1-C_6)alkylsilyl, hydroxyl, amino, (C_1-C_6)alkylamino and di(C_1-C_6)alkylamino groups, with the exception of 5-amino-2-((3R)-3-*t*-butyldimethylsilyloxy-1-pyrrolidyl)fluorobenzene.